

W1TKZ

The Spark Gap

MARCH 1981

Book VII Vol III

Official Journal of the Wellesley Amateur Radio Society

ANNOUNCEMENT

The Wellesley Amateur Radio Society received a nice write up in the Wellesley Townsman of September 25, 1980, as was recently brought to our attention by W10QP.

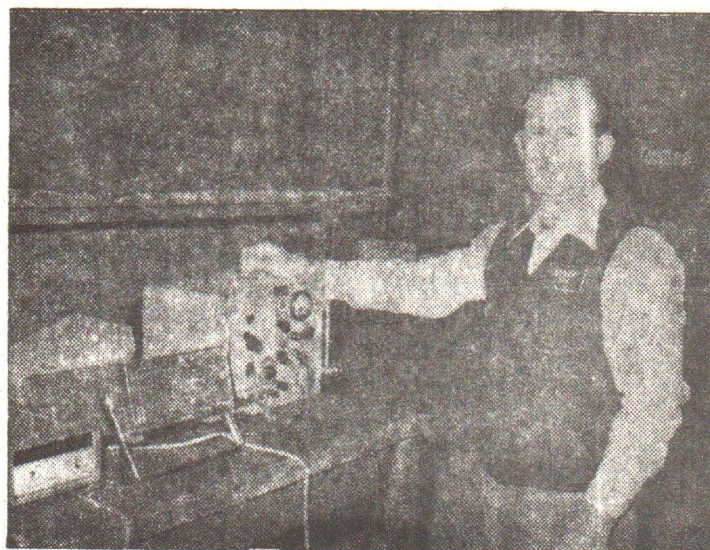
Dick Paret, WA1ZLQ, is quoted on the operation at the Boston 350 Parade and our general set-up, including the use of repeaters is described. Col. William Gormley, the National Guard operations officer for Massachusetts, was quoted as follows: "The society's performance was outstanding. They exceeded every expectation we had. A parade of that magnitude required tremendous communication."

That kind of praise makes you feel good to get involved. Our club has quite a record of involvement in such public service events. Hopefully, in the future even more members will be able to get involved. □

EVENTS

At the January 22nd meeting we had Erik Thoresen, K10GF, as our speaker on the topic of test equipment. He brought with him some of the many basic pieces of test equipment that

an Amateur might need to adjust or repair his equipment and demonstrated each piece. Many sources of errors in measurements were pointed out which can give the unwary Amateur a reading quite different than what is actually happened. All in all, a very interesting and informative talk. □



Erik Thoresen, K10GF, demonstrating some test equipment.

At the March 19th meeting, we are pleased to have George Snider, director of Massachusetts Army MARS as our speaker for the evening. Mr. Snider who is a ham and also protocol officer at Natick Army Labs will tell us about the Army version of the Military Affiliate Radio System which, although not part of the Amateur Radio service is closely aligned and primarily staffed by volunteer hams. This talk should give you an opportunity to hear more about this service. Please plan to attend! □

MEETINGS THIS MONTH:

March 5, 1981 at 7:30 pm

March 19, 1981 at 7:30 pm

Intermediate Bldg., Wellesley Hills, Mass.

Auctions / Flea Markets

February 28: Norwood ARC flea market, at Norwood V.F.W., Dean Street, off Rt. 1 south, about 3 miles from Rt. 128. Set up at 9:30 am, open from 10:30 to 3:00. Refreshments sold, talk in (K1JMR) on 146.52. Admission \$1.00.

March 6: University of Lowell Wireless Society flea market, Cumnock Hall, north campus of University of Lowell. Set up starts at 6:00 pm, flea market runs 7:00 to 11:00 pm. Admission is 50¢. For table reservations, contact University of Lowell Wireless Society, Student Information Center, Box 133, University of Lowell, Lowell, Mass. 01854. Talk in on 146.52 and 147.12.

April 12: Framingham ARA indoor flea market, drill shed behind the Framingham Police station, 81 Union Street. Set up starts at 9:00 am, doors open at 10:00. Admission \$1.00.

April 18: Our own Wellesley ARS auction at Wellesley High School. Check in starts at 10:00 am, and the auction at 11:00. Plan on coming early to help set up!

April 26: Middlesex ARC flea market, Wayland High School common on Rt. 126 between Rts. 20 and 30. Set up at 9:00 am, flea market from 10:00 to 4:00. Admission \$1.00, talk in on 147.36.

May 9: Hosstraders flea market. □

hr REPORT

Cable TV systems are posing a potential threat to Amateur Radio operation. Since they are supposed to be closed (non-radiating) systems, many utilize the VHF spectrum from 50 to above 225 MHz for their multi-channel content, providing subscribers with continuous tuning converters to permit them to tune in cable channels outside the standard 12-channel VHF band. This puts some cable-carried signals into the Amateur bands, and when systems leak (an all too common occurrence), interference to Amateur operations can result.

Amateur interference to cable reception is the other side of the coin. Cable subscribers who've paid to watch cable material being transmitted within the Amateur band aren't likely to be very sympathetic when poorly shielded converters pick up Amateur signals that wipe out their programs.

ARRL has been watching the development of potential problems from cable TV, and would like to hear from any Amateur who has had difficulties with interference to or from cable TV systems. Because cable TV is a regulated utility, cable system operators are required to take care of problems with their systems.

hr Report, January 30, 1981□

OFFICERS

PRESIDENT

David Curry, K1TK, 237-2450

VICE PRESIDENT

Erik Thoresen, K1OGF, 653-1216

CORRESPONDING SECRETARY:

Bill Hanlon, N1ADY, 384-8056

RECORDING SECRETARY:

Nels Anderson, K1UR, 323-5029

TREASURER:

Jim Hatherley, WA1TBY, 254-6042

OPERATING ACTIVITIES:

Glenn Brodie, N1ACN, 443-8677

FUND RAISING:

Kevin Kelly, WA1YHV, 242-0341

EDUCATION CHAIRMAN:

Bill Downing, WA1PQY, 655-3040

EMERGENCY COORDINATOR:

David Curry, K1TK, 756-5325

TECHNICAL COMMITTEE:

Mort Cohan, KA1IU, 359-7979

ELECTION COMMITTEE:

C.J. McDonald, WB1BUM, 332-6091

STATION MANAGER:

Erik Thoresen, K1OGF, 653-1216

TRUSTEE:

Lud Fasolino, K1LF, 237-0316

REPEATER COMMITTEE:

David Curry, K1TK, 237-2450

Bill Downing, WA1PQY, 655-3040

Scott Nacey, WA1YOJ, 235-1599

Dick Paret, WA1ZLQ, 762-5074

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society



EDITOR-IN-CHIEF:

NELS J. ANDERSON, K1UR
32 WESTGATE ROAD, APT. 6
CHESTNUT HILL, MASS. 02167
323-5029

THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, F.C.C. RULES & REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SENT THEIR ARTICLES (TYPEWRITTEN IF POSSIBLE) TO THE EDITOR-IN-CHIEF OR TO THE CLUB ADDRESS.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS \$8. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
324 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181



OFFICIAL BULLETIN

Number 9, dated January 29, 1981:

Amateur Radio operators will participate in the celebration of the one hundredth birthday of the American Red Cross by conducting a nationwide radio-gram message relay, originating congratulatory messages from Red Cross chapters throughout the United States to Red Cross national headquarters. Each ARRL section will play an important role in this effort. An information package has been sent to all ARRL section communications managers, section traffic managers and section emergency coordinators to assist them in coordinating the message relay in their section. Further details can be obtained by contacting these League officials.

Minutes

Meeting of January 22, 1981:

The meeting was opened at 7:44 pm by President David Curry, K1TK.

It was announced that on October 1-4 there will be a Wellesley Centennial Country Fair. It was suggested that we set up some type of booth, perhaps with a message center.

It appears that some bootleggers are getting into the repeater by operating simplex on 147.62 MHz. The problem will be listened to further.

It was announced that the new microprocessor repeater controller was almost finished and might be up by the weekend.

WARS members were asked to participate in the March 15 Shamrock Run and May 3 Charles River Run. To sign up or for more information, contact Dick Paret, WA1ZLQ.

Business was concluded at 7:58 pm and the meeting continued with Erik Thoresen's talk.

Meeting of February 5, 1981:

The meeting was opened at 7:44 pm by President David Curry, K1TK.

The secretary's report was read.

The auction, April 18, was discussed and a progress report was given.

Dick Paret, WA1ZLQ, gave a report on the BAA meetings he has been attending concerning the marathon. Some changes are in the works that will be affecting our operation.

Field Day sites were again given consideration. Of those at the meeting indicating interest in attending Field Day, about 90% were interested in returning to Martha's Vineyard, so at the present this is the leading candidate for our 1981 Field Day site.

The Wellesley Centennial events in October were briefly discussed.

It was announced that as of February 1 the repeater is microprocessor controlled. Some of the user functions available were demonstrated by K1TK, and plans for future functions were detailed.

The treasurer's report was given.

It was announced that the new FCC Form 610 is available at the club for those needing a change in their license.

The meeting was closed at 8:53 pm. □

OLD TIME RADIO

by Jim Idelson, K1IR

Part Nine

The success of AT&T's linking of stations invited duplication by the other major broadcasters. General Electric and RCA linked several stations via telegraph lines with less than mediocre results. Of course, AT&T would not lease their special lines to the competition. AT&T was providing superior programming to anything anyone had attempted on the local level. Stations began to reluctantly give in to the licensing fees in order to step into the AT&T broadcasting limelight.

Early in 1924, a new development sprang up. Experimentation, especially at Westinghouse, in the area of short waves was producing successful results. Very soon it became apparent that what had once, quite recently in fact, been considered a useless part of the radio spectrum proved to be extremely valuable. Long distances, world-wide, were being achieved with spectacular clarity. Programs were now available from the remotest corners of the world. Also, short waves could be used in place of wires for the purpose of linking stations for simulcasting. A giant step towards countering AT&T's head start in networks had been taken by the alliance.

While many stations solved the problem of full-time programming through the implementation of network lines, the recurring question of finances was again raised. Some suggested endowment of a station by a public-spirited citizen. The fact that only very few such people existed put a damper on that idea. In New York City, WNYC went on the air sponsored by the city government. Several other cities set up similar stations but the idea was not well accepted in most municipalities.

Radio Broadcasting magazine offered a \$500 prize for the best suggestion--"who is to pay for broadcasting--and how." The prize winning entry suggested a tax on receiving equipment. It

would, according to the writer, raise approximately 18 million dollars annually to be contributed to a central broadcasting organization.

Still, with the various ideas that were being tried, toll broadcasting was making an amazing story at WEA. The AT&T station had gone to a new policy of sponsorship. They were now allowing the name of the sponsor to appear in the name of the program. The program could have any content, and the sponsors were encouraged to pay for the time and talent in return for on-the-air mention. The Eveready Hour was the first super-successful venture of this kind. Eveready paid for all actor expenses including some lengthy journeys. When the program succeeded, the Eveready Hour was put on all of WEA's network stations.

Inside the alliance some surprising developments were occurring. AT&T was planning to put receiving equipment on the market. In step with their previous technical achievements the receivers were of the highest quality. It was feared by RCA, General Electric and Westinghouse that the company which had succeeded to overwhelm them in the transmitting field might have been trying to cut into the lucrative receiver domain. Accusations of gross misinterpretations of the cross-licensing agreements were being made. All this was done in secret in order to maintain the proper public image.

Suddenly, while the corporations were trying to resolve their difficulties in secret, the Federal Trade Commission issued the Report of the Federal Trade Commission on the Radio Industry. The report, issued on December 1, 1923, was followed up with a formal complaint against the allies, charging that they had created a monopoly in the industry. With the secret talks between the allies and the new public affront there was a lot of apprehension behind the scenes in the alliance.

Dr. J.R. Brinkley was the first to step head-on into full commercialism in radio. He set up a station, KFKB, and with brilliant programming of his own, attracted a huge audience. He was licensed to a preferred frequency and began to advertise a mail order

drug service in broadcasts which could be heard in most parts of the country. With his sales pitch, he reached a gold mine.

Many stations went commercial in 1925 and 1926 by way of the license fee paid to AT&T. Nineteen hundred twenty five was a bad year for school and university stations. They were still on 360 meters, and in some cases they could be heard by no one, even locally. Interference from high powered stations operating very close to 360 meters would completely obliterate them. With rising costs to contend with as well, thirty-seven stations left the air in 1925 and only twenty-five new stations were licensed.

(The changes due to the Third and Fourth National Radio Conferences will be examined next month.) □

hr REPORT

New FCC Chairman may be Mark Fowler according to the current Washington rumors. He's a long-time associate of President Reagan, but what his communications background is hasn't been discussed. Commissioner Lee, who's considered in the lead for interim chairman, has announced his intention to retire when his term ends in July. Other rumors are circulating that Commissioner Quello, whose term expired last year but who has continued to serve pending nomination of a successor, may be reappointed to another term.

The Private Radio Bureau's sometimes controversial Chief, Carlos Roberts, is reported by the Washington rumor mill to be planning to leave the FCC to join a major communications firm.

hr Report, January 30, 1981

FCC's "plain language" Amateur rules proposal is now available from the ARRL. The 52-page booklet containing the entire FCC Notice of Proposed Rule Making is only a dollar, postage paid.

Copies are being sent to all League affiliated clubs and all who are on the Directors' Letter Mailing list.

hr Report, January 30, 1981□

THE NEW W1TKZ

by Nels Anderson, K1UR

On Sunday, February 1, 1981, the 147.63/03 repeater W1TKZ/R entered the computer age when its new microprocessor controller was installed. The new controller, a joint project constructed by David Curry, K1TK, and programmed by Nels Anderson, K1UR, worked almost immediately after installation and at this time is performing well.

The new controller allows easier access to the basic repeater functions such as time-out time, squelch tail, etc. All basic functions can be varied over the air by Touch-Tone commands. In addition, the phone line at the hospital can be dialed up and the repeater controlled through this line using the same Touch-Tone commands.

At the present time, only two of these commands are available to the repeater users. These are: Send Repeater I.D. which is accessed by the Touch-Tone sequence *43, and Touch-Tone Test, which is accessed by the sequence #*n, where n is the digit to be tested in the range 0 to 9. Later, other functions will be added such as time of day. These commands will be listed in the Spark Gap as they become available.

The repeater also has the ability to send messages in Morse code. This message will be played just before the repeater I.D. approximately every ten minutes. It can also be played at any time by giving the I.D. repeater command *43. Messages will often be abbreviated, such as "NM THURS" (next meeting Thursday) or "EM WED" (executive committee meeting Wednesday).

Further articles on the technical side of the new W1TKZ/R will appear in the future. For now, please get on 63/03 and try out the computer age repeater! □

April issue deadline: March 15!



DOLLARS CENTS

by Dennis Blanchard, K1YPP

--from Interstate Repeater Society
"I.R.S Communicator"

Never have so few owed so much to so many, or at least it seems that way with today's spiraling inflation. Before we give up on the situation completely, let's consider Amateur Radio equipment costs versus approximately that of twenty years ago. It is difficult to make a direct comparison for several reasons. First: wages for the same amount of work have, in most cases, tripled in twenty years. Secondly: equipment today has to provide more functions than were needed many years ago. (SSB, RTTY, FM, etc. were not as popular as is the case now.) Thirdly: today most equipment can be purchased via a toll-free number with the jobber selling the unit below list (also happens at conventions). This was not too common many years ago. I will avoid discount prices in the following comparisons.

As far as two meter equipment was concerned, there was not much to choose from at the time. There were actually no real HT's to choose from, and most stations were too heavy to be considered portable.

A typical 2 meter transceiver around 1960 was the Gonset "Gooney Box"; it was rock-bound AM only and cost about \$250-\$300. It would keep the shack warm on a cold winter night, and if you were to go mobile, it was a decision between the Gonset or your spouse on the front seat.

Another state of the art 1960's transceiver was the Polycomm PC2 AC/DC. This was a real step forward. It sold for only \$350 and would run on AC or DC; what's more, it had a built-in VFO! This was great, you could now transmit and receive on the same frequency, although it wasn't automatic. You had two VFO dials, one for the receiver section and one for the transmitter.

Gonset also manufactured another transceiver for several years that was not very reliable and didn't sell well: the "Sidewinder 900A"; the specifications on this one would blow your socks off!! It was SSB, AM, and CW. All that for only \$400. If only you knew someone else that had one, then you could have a QSO. (Most of your friends had Heath-kit lunchboxes, a super-regen \$45 rock-bound kit that is not in the same league of the equipment discussed here.)

Clegg was perhaps the best of the old ones, and also the most costly. The 22'er was a crystal controlled 2 meter AM transceiver which sold for only \$240. Next they had the Interceptor receiver for only \$473 and the matching Zeus 6&2 transmitter for only \$695. This was still AM equipment, but at least it was VFO controlled and did a respectable job.

What do we have today in comparison? Well, we certainly have many to choose from. The better HT's certainly have comparable prices, Tempo's at \$299, Icom IC-2A at \$229, Yaesu FT207R at \$299, and the Kenwood TR-2400 at \$350 offer far more performance and flexibility than any of the older equipment.

For base/mobile use we can choose from many, the Yaesu FT227RA for \$399, the Kenwood TR-7625 for \$425 and the very expensive Drake UV-3 for \$995, still less than the old Clegg units.

The list could go on indefinitely, but the point is, we Amateurs have never had it so good. The one unfortunate aspect of all this is that, with the exception of Drake in some cases, most of this equipment is manufactured offshore, which has sent jobs overseas.

So now that you have some ammunition, go find your spouse and point out the important parts of this article and rush down to the nearest Amateur "toy" store and get a new toy before the situation should change. □

King Juan Carlos of Spain, EA0JJC, is arriving in Los Angeles February 9 to begin an official visit to the United States. He's scheduled to visit Santa Barbara, Santa Fe, and San Antonio before arriving in Washington February 16. Thanks K3ZD.

hr Report, January 30, 1981□